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SCIENCE.

FRIDAY, FEBRUARY 19, 1886.

COMMENT AND CRITICISM.

MR. J. SCOTT KELTIE'S REPORT (Supplementary papers, Royal geographical society, part iv.), as inspector of geographical education, should be read by all who are interested in the cause of sound education. As to England, he says the situation of geographical education is best summed up in the words of an educational authority, whose name is not given : (1) "In universities it is *nil* ; (2) in public schools, very nearly *nil* ; and when it is attempted, it is given to the most incompetent master, and he has a wretched set of maps ; (3) it is required for the public services, and taught, I do not know how, by crammers ; (4) the only places where geography is systematically taught in England are the training colleges and the board-schools, with now, and for the last few years, some few good high and middle-class schools." This is due mainly to the fact that the study of geography does not 'pay.' There is no demand for high-grade teachers, as there are no professors or readers of geography in the universities. It has no real place in the examinations upon which so much depends in England, and therefore the teachers in some of the best schools actually advise their pupils not to study geography. How different in Germany, in France, and even in Spain ! Considering the candid way in which the inspector has spoken of the English schools, it is perhaps fortunate that our worthy ex-commissioner of education was unable to furnish him with any information concerning the study of geography in American schools.

As a part of his duty, Mr. Kelsie made a collection of appliances used in geographical education throughout the world. These were placed on exhibition, and a catalogue issued. Here, again, the Germans led, as, indeed, one who has used Stanford's and Reimer's maps side by side in the classroom would have expected. In his explorations for such material, the inspector had many strange experiences ; as, for instance, at one of the oldest and most celebrated English public schools he

found only two maps, — "one a large map of the Dominion of Canada, presented by the high commissioner, ornamenting one of the passages ; and another wretched school wall-map, exhumed, after much searching, from a remote recess." In contrast to this, he prints a list of the appliances used in teaching geography in the Frankfort Wöhler-schule, and in other German schools. In the above-named school there are in actual use one hundred and seven maps, pictures, models, and atlases. The exhibition was designed to illustrate the actual condition of things ; "and, therefore, in all classes," according to Mr. Keltie, "will be found objects which may be taken as examples of 'how not to do it.'" Most of these were of English make. It is a curious commentary on our own methods, and especially on our publishers of educational works, that of the 305 maps, globes, models, relief-maps, etc., not one came from this side of the Atlantic. There were 163 atlases, but not a single atlas bore the imprint of an American publisher. Among the 229 text-books, only three — Miss Hale's 'Methods of teaching geography,' Hopkins's 'Handbook of the earth,' and Swinton's 'Complete course' — were of American manufacture. And on the whole the exhibition was not one of which either Englishmen or Americans should be proud.

SCIENCE AND THE STATE is the subject of a recent article by Dr. Shufeldt in *Mind in nature*, wherein he makes some very pertinent criticisms upon the heterogeneous condition of the national scientific work and the desirability of its greater unification. He proposes a scheme whereby this may be effected ; viz., that a department of science should be created by congress, the head of which should be a cabinet officer, to be designated as the secretary of science, and to be chosen from the National academy of sciences ; that this department should be divided into eleven bureaus, — agriculture, biology, chemistry, education, ethnology, geology, geodesy and surveying, meteorology, military and civil engineering, sanitary science, and industry ; and that all appointments should be made by the National academy of sciences, and approved by the president of the United States. For the accommodation of

this department of science, he would have a large building erected, and liberal appropriations made. We doubt the entire feasibility of such a scheme. In the first place, to restrict the president in the choice of members of his cabinet to any given body of men, no matter how eminent that body may be, is simply out of the question; nor would this restriction be desirable. Members of the National academy are such because they are eminent specialists, and a specialist should be the last to control a department of this kind. Dr. Shufeldt also proposes, that commissioned army and navy officers who show scientific abilities should be encouraged and provided for by the government: this, too, has certain objections. Why the United States should hold out inducements to its commissioned officers to abandon the duties for which they were appointed, one cannot see. A surgeon or lieutenant of artillery has certain specific duties for which he enjoys a salary and future competency. By all means, he should be encouraged to excel in those duties, and he should not be discouraged in any other commendable work that he may undertake without detriment to them; but should government hold out direct reasons for him to become an archeologist, a philologist, a naturalist, or a physicist? Are army officers government wards, or government servants? and why should they have greater inducements to become Sanscrit scholars, chemists, and comparative anatomists, than the general public?

THE GREAT COST of elaborate printed catalogues, in which many of our wealthier libraries are now indulging, suggests the desirability of a scheme of co-operative cataloguing, which is stated at some length in this week's number of *The nation*, by Mr. Fletcher, the librarian at Amherst. He calls attention to the fact that nearly all our considerable libraries are making, or keeping up, elaborate catalogues, which are, to a large extent, repetitions of one another. As the suggestion of an experienced librarian, we incline to attach considerable significance to his saying that a very large share of the present cataloguing expense borne by these libraries is "wasted in the reduplication of that which ought to be done once for all. . . . Already this system of elaborate cataloguing, repeating itself in scores, even hundreds, of libraries, is breaking down of its own weight." Mr. Fletcher regards co-operation as furnishing the only

solution of this important question, — a solution, too, "capable of meeting the needs of the twentieth century, when our libraries will be numbered by thousands, and the volumes in scores of them by millions. . . . The time must soon come when the libraries will no longer undertake to provide subject catalogues of their own. The author catalogues will necessarily be kept up, as each library must have a list of its books. But in place of the subject catalogues we shall have printed bibliographies of subjects, issued, for the most part, periodically, and serving equally for one library or another." These bibliographies may often indicate which libraries contain the rarer publications, on the plan admirably executed in Dr. Bolton's list of scientific periodicals, lately issued by the Smithsonian institution. Such a scheme of bibliographies and subject-indexes is unquestionably feasible, and Mr. Fletcher thinks it furnishes the only possible solution of the problem. It is to be hoped that the directors of our public and college libraries will show themselves ready to co-operate in whatever manner the co-operation committee of the American library association, of which Mr. Fletcher is the chairman, may decide upon. The committee invite any suggestions which may assist in forwarding the proposed reform.

THE LEADING SPIRITS of the theosophical society are evidently undismayed by the testimony against their honesty and candor, as adduced in the investigation carried on under the auspices of the English society for psychical research. A protest is now commenced against the conclusions of that investigation, prepared by A. P. Sinnett and Madame Blavatsky. The report of the psychical research society was noticed in *Science* (vol. vii. p. 81); and any effectual protest against conclusions so clear and decided as those of that report must be accompanied by the strongest evidence possible.

PROGRESS IN INDIA.

THE possibility of any national movement among the natives of India, looking toward state organization and self-government, has scarcely ever been accepted by her rulers and other civilized nations. Recent developments, however, seem to indicate that the Indian capacity has been underrated. A correspondent of the *London Times* states that the Bombay leaders have lately